DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. AQ0215TVP02

Issue Date: August 8, 2007
Expiration Date: September 7, 2012

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **City of Unalaska, Department of Public Utilities**, for the operation of the **Dutch Harbor Power Plant**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

Upon the effective date of this permit, the Permittee is not required to comply with the terms and conditions of Air Quality Control Permit No. AQ0215TVP01 Revision 1.

This operating permit becomes effective on September 7, 2007.

FOR

John F. Kuterbach, Manager
Air Permits Program

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List of Abbreviations Used in this Permit

AAC.....Alaska Administrative Code
ADEC .....Alaska Department of Environmental Conservation
AP-42.....EPA report, Compilation of Air Pollutant Emission Factors
AS .....Alaska Statutes
ASTM .....American Society for Testing and Materials
bhp .....boiler horsepower
C.F.R.....Code of Federal Regulations
dscf.....Dry standard cubic foot
EPA.....US Environmental Protection Agency
gr./dscf.....grain per dry standard cubic foot (1 pound = 7000 grains)
gpy .....gallons per year
HAPs.....Hazardous Air Pollutants [*HAPs* as defined in AS 46.14.990(14)]
ID .....Emission Unit Identification Number
MMBtu/hr.....Million British Thermal Units per hour
MR&R .....Monitoring, recordkeeping, and reporting
NESHAPs .....Federal National Emission Standards for Hazardous Air Pollutants [*NESHAPs* as contained in 40 C.F.R. 61 and 63]
NOx .....Nitrogen Oxides
NSPS.....New Source Performance Standards [*NSPS* as contained in 40 C.F.R. 60]
O & M.....Operation and Maintenance
O_2.....Oxygen
PM-10 .....Particulate Matter less than 10 microns in diameter
PPM .....Parts per million
PPMv, PPMvd .....Parts per million by volume on a dry basis
psia.....Pounds per Square Inch (absolute)
PSD.....Prevention of Significant Deterioration
RM.....Reference Method
S .....Sulfur
PTE.....Potential to Emit
SIC.....Standard Industrial Classification
SIP .....State Implementation Plan
SO_2.....Sulfur dioxide
TPY.....tons per year
VOC.....volatile organic compound [*VOC* as defined in 18 AAC 50.990(121)]
wt percent .....weight percent

Section 1. Identification

Names and Addresses:

Permittee:	City of Unalaska, Department of Public Utilities P.O. Box 610 Unalaska, Alaska 99685
Stationary Source:	Dutch Harbor Power Plant
Location:	UTM Coordinates Zone 3, Northing 5972.60 km, Easting 399.06 km
Physical Address:	1732 East Point Road Dutch Harbor, Alaska 99685
Owner:	City of Unalaska, Department of Public Utilities P.O. Box 610 Unalaska, Alaska 99685
Operator:	Same as Owner
Responsible Official:	Chris Hladick Interim Director of Public Utilities P.O. Box 610 Unalaska, Alaska 99685 (907) 581-1260
Designated Agent:	Chris Hladick Interim Director of Public Utilities
Building Contact:	Dan Winters Operator III Powerhouse Operator P.O. Box 610 Unalaska, Alaska 99685 (907) 581-1831
Fee Contact:	Chris Hladick Interim Director of Public Utilities

SIC Code of the Stationary Source: 4911, Electrical Services

[18 AAC 50.326(a), 10/1/04]
[40 C.F.R. 71.5(c)(1 & 2), 7/1/03]

Section 2. Emission Unit Inventory and Description

Emission units listed below have specific monitoring, recordkeeping, or reporting conditions in this permit. Emission unit descriptions and ratings are given for identification purposes only.

Table 1 - Emission Unit Inventory

EU ID	Emission Unit Name	Emission Unit Description	Rating/Size	Installation Date
1	Generator #1	Caterpillar D-353E SN 46B4228	300 kW	10/1985
2	Generator #2	Caterpillar D-353 SN 46B4255E	300 kW	3/1987
3	Generator #3	Caterpillar D-398 SN 66B7065	600 kW	10/1986
4	Generator #4	Caterpillar 3512 SN 67Z00553	830 kW	10/1986
5	Generator #5	Caterpillar 3512 SN 67Z00498	620 kW	10/1985
6	Generator #6	Caterpillar 3516 SN 25Z00799	1440 kW	10/1985
7	Generator #7	Caterpillar 3516 SN 73Z00272	1180 kW	11/1989
8	Generator #8	Caterpillar 3512B SN 2S19157	1230 kW	1/1994

[18 AAC 50.326(a), 10/1/04]
[40 C.F.R. 71.5(c)(3), 7/1/03]

Section 3. State Specific Requirements

Visible Emissions Standards

1. **Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall comply with the following:

   1.1 Do not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1 through 8 listed in Table 1 to reduce visibility through the exhaust effluent by any of the following:

   a. more than 20 percent for more than three minutes in any one hour.[1]

   [18 AAC 50.040(e) & (j) and 50.326(j), 10/1/04; and 18 AAC 50.055(a)(1), 1/18/97]
   [40 C.F.R. 52.70 and 71.6(a)(1), 7/1/03]

   b. more than 20 percent averaged over any six consecutive minutes.[2]

   [18 AAC 50.040(j) & 50.326(j), and 18 AAC 50.055(a)(1), 5/3/02]
   [40 C.F.R. 71.6(a)(1), 7/1/03]

Visible Emissions Monitoring, Recordkeeping, and Reporting

2. **Visible Emissions Monitoring.** The Permittee shall observe the exhaust of EU IDs 1 through 8 for visible emissions using either the Method 9 Plan under condition 2.1or the Smoke/No-Smoke Plan under condition 2.2. The Permittee may change visible-emissions plans for an emission unit at any time unless prohibited from doing so by condition 2.3.

   [18 AAC 50.040(j), 12/3/05, 18 AAC 50.326(j) 12/3/05 and 18 AAC 50.346(c), 10/1/04]
   [40 C.F.R. 71.6(a)(3)(i), 7/1/04]

   2.1 **Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

   a. First Method 9 Observation. For any unit, observe exhaust for 18 minutes within 14 calendar days after changing from the Smoke/No-Smoke Plan of condition 2.2. For any units replaced during the term of this permit, observe exhaust for 18 minutes within 30 days of startup.

   b. Monthly Method 9 Observations. After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that a source operates.

[1] For purposes of this permit, the "more than three minutes in any one hour" criterion in this condition and condition 11 will no longer be effective when the revisions to 18 AAC 50 dated 5/3/02 are adopted by EPA.
[2] The six-minute average standard is enforceable only by the state until the revisions to 18 AAC 50 dated 5/3/02 are adopted into the State Implementation Plan (SIP), at which time it will also be federally enforceable.

c. Semiannual Method 9 Observations. After observing emissions for three consecutive operating months under condition 2.1b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, perform 18-minute observations at least semiannually.

Semiannual observations must be taken between four and seven months after the previous set of observations.

d. Annual Method 9 Observations. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, perform 18-minute observations at least annually.

Annual observations must be taken between 10 and 13 months after the previous observations

e. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that source to at least monthly intervals, until the criteria in condition 2.1c for semiannual monitoring are met.

2.2 **Smoke/No Smoke Plan.** Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that an emission unit operates.

b. Reduced Monitoring Frequency. After the emission unit has been observed on 30 consecutive operating days, if the emission unit operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that an emission unit operates.

c. Smoke Observed. If smoke is observed, either begin the Method 9 Plan of condition 2.1 or perform the corrective action required under condition 2.3.

2.3 **Corrective Actions Based on Smoke/No Smoke Observations**. If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of condition 2.2, then the Permittee shall either follow the Method 9 plan of condition 2.1 or

a. initiate actions to eliminate smoke from the emission unit within 24 hours of the observation;

b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and

c. after completing the actions required under condition 2.3a,

(i) take Smoke/No Smoke observations in accordance with condition 2.2

(A) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and

(B) continue as described in condition 2.2b; or

(ii) if the actions taken under condition 2.3a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of condition 2.3c(i), then observe the exhaust using the Method 9 Plan unless the department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under condition 2.2a.

2.4 If using the Method 9 Plan of condition 2.1,

a. the observer shall record

(i) the name of the stationary source, emissions unit and location, stationary source type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in Section 12;

(ii) the time, estimated distance to the emissions location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;

(iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;

(iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Record in Section 12; and

(v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period;

b. to determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet;

c. calculate and record the highest 18-consecutive-minute average observed.

2.5 If using the Smoke/No Smoke Plan of condition 2.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the department:

a. the date and time of the observation;

b. from Table 1, the ID of the emission unit observed;

c. whether visible emissions are present or absent in the exhaust;

d. a description of the background to the exhaust during the observation;

e. if the emission unit starts operation on the day of the observation, the startup time of the emission unit;

f. name and title of the person making the observation; and

g. operating rate (load or fuel consumption rate).

3. Visible Emissions Reporting. The Permittee shall report visible emissions as follows:

[18 AAC 50.040(j), 50.326(j) & 50.346(c), 1/29/05]
[40 C.F.R. 71.6(a)(3)(iii), 7/1/03]

3.1 include in each Operating Report under condition 41:

a. which visible-emissions plan of condition 2 was used for each emission unit; if more than one plan was used, give the time periods covered by each plan;

b. for each emission unit under the Method 9 Plan,

(i) copies of the observation results (i.e. opacity observations) for each emission unit that used the Method 9 Plan, except for the observations the Permittee has already supplied to the department; and

(ii) a summary to include:

(A) number of days observations were made;

(B) highest six-minute average observed; and

(C) dates when one or more observed six-minute averages were greater than 20 percent;

c. for each emission unit under the Smoke/No Smoke Plan, the number of days that Smoke/No Smoke observations were made and which days, if any, that smoke was observed; and

d. a summary of any monitoring or record keeping required under condition 2 that was not done;

3.2 report under condition 40:

a. the results of Method 9 observations that exceed an average 20 percent for any six-minute period; and

b. if any monitoring under condition 2 was not performed when required, report within three days of the date the monitoring was required.

Particulate Matter Emissions Standards

4. **Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from Unit IDs 1 through 8 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.040(j) & 50.326(j), and 18 AAC 50.055(b)(1), 1/18/97]
[40 C.F.R. 71.6(a)(1), 7/1/03]

PM Monitoring, Recordkeeping and Reporting

5. **Particulate Matter Monitoring for Diesel Engines and Liquid Fired Turbines.** The Permittee shall conduct source tests on diesel engines and liquid fired turbines, Units IDs 1 through 8, to determine the concentration of particulate matter (PM) in the exhaust of a source in accordance with this condition 5.

5.1 Within six months of exceeding the criteria of condition 5.2a or 5.2b, either

a. conduct a PM source test according to Section 7; or

b. make repairs so that emissions no longer exceed the criteria of condition 5.2; to show that emissions are below those criteria, observe emissions as described in condition 2.1 under load conditions comparable to those when the criteria were exceeded.

5.2 Conduct the test according to condition 5.1 if:

a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or

b. for an emission unit with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the department has waived this requirement in writing.

5.3 During each one hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one hour test run. Submit a copy of these observations with the source test report.

5.4 The automatic PM source test requirement in condition 5.1 and 5.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

6. **Particulate Matter Reporting for Diesel Engines and liquid Fired Turbines**. The Permittee shall report as follows:

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j) & 50.346(c), 10/1/04]
[40 C.F.R. 71.6(a)(3)(iii), 7/1/04]

6.1 report under condition 40:

a. the results of any PM source test that exceeds the PM emissions limit; or

b. if one of the criteria of condition 5.2 was exceeded and the Permittee did not comply with either condition 5.1a or 5.1b, this must be reported by the day following the day compliance with condition 5.1 was required;

6.2 report observations in excess of the threshold of condition 5.2 within 30 days of the end of the month in which the observations occur;

6.3 in each Operating Report under condition 41, include:

a. the dates, EU ID(s), and results when an observed 18-minute average was greater than an applicable threshold in condition 5.2;

b. a summary of the results of any PM testing under condition 5; and

c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of condition 5.2, if they were not already submitted.

Sulfur Compound Emission Standards Requirements

7. Sulfur Compound Emissions. In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 1 through 8 to exceed 500 PPM averaged over three hours.

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j), 12/1/04; and 18 AAC 50.055(c), 1/18/97]
[40 C.F.R. 71.6(a)(1), 7/1/04]

7.1 Comply with this condition by using fuel with a sulfur content of equal to or less than 0.17 percent by weight.

7.2 Obtain a statement or receipt for each delivery from the fuel supplier showing the sulfur content of the fuel for each shipment of fuel delivered to the stationary source. If a certificate is not available from the supplier, analyze a representative sample of the fuel to determine the sulfur content by weight using an approved ASTM method such as ASTM D 129, 1266, 1552, 2622, 3120, 4045, or 4294. Maintain records per condition 36.

7.3 Report in accordance with condition 40 whenever the fuel sulfur limit in condition 7.1 is exceeded. When reporting under this condition, if the fuel sulfur content is greater than 0.75 percent by weight, include a calculation of the sulfur compound emissions, in PPM, expected to result from burning this fuel using the equations in Section 13.

7.4 Include in the Operating Report required by condition 41:

a. a list of sulfur content by weight for each shipment of fuel received at the stationary source during the reporting period, and

b. for fuel with a sulfur content greater than 0.75 percent sulfur, the calculated SO_2 emissions in PPM.

[18 AAC 50.326(a), 10/1/04]
[40 C.F.R. 71.2 and 71.6(a)(1 & 3), 7/1/03]
[Permit to Operate No. 9625-AA003, 6/21/96]

8. Used Oil. The Permittee is prohibited from burning used oil blends in the engines except as provided by condition 8.1, until the department approves of a source test demonstrating that burning the used oil will comply with the particulate matter emission standard of condition 4 and the visible emission standard of condition 1.

8.1 Used oil blends can be burned during the initial source test for testing purposes only.

8.2 After department approval as set out by condition 8, the Permittee shall comply with the following[3]:

a. Analyze each batch of used oil to determine the sulfur content using an approved ASTM method such as ASTM D975-84, D3120-92, D4152-90, D2622-91, ASTM 396-92. Maintain records showing the results of each analysis.

b. Blend the used oil with virgin oil at a ratio that will ensure compliance with the sulfur limit of condition 5. However, the used oil blend shall be mixed at a ratio of no more than tested as set out by condition 8.

c. Account for the consumption of the used oil blend as set out by condition 9.2;

8.3 Include with the Operating Report required by condition 41:

a. Results of each analysis as set out by condition 8.2; and

b. For each batch of used oil blended, the amounts of virgin oil and used oil; the blend ratio; and the final sulfur content.

c. Report as set out by condition 40 any time the blend ratio or other requirements deviate from condition 8.

[18 AAC 50.326(a), 10/1/04]
[40 C.F.R. 71.2 and 71.6(a)(1 & 3), 7/1/03]

[3] CAUTION! Although this condition should ensure compliance with the applicable emission standards of 18 AAC 50, this permit does NOT ensure compliance with other applicable state or federal laws concerning management, use, or disposal of used oil.

Section 4. Stationary Source-Wide Requirements

9. Limits to Protect Ambient Air Quality. The Permittee shall comply with the following limits to protect ambient air quality for NO_2 and SO_2 emissions:

9.1 Limit the sulfur content of all fuel burned to no greater than 0.17 percent by weight. Monitor, record, and report as set out by Condition 8.

9.2 Emission unit IDs 1 through 8 shall not exceed 633.1 tons of NOx per 12 month rolling period, combined; and

9.3 Emission unit IDs 1 through 8 shall not exceed the allowable annual power-production and fuel-consumption limits for emission unit IDs 1 through 8, tabulated in Table 2, per 12 month rolling period.

Table 2 - Limits to Protect Ambient Air Quality

Unit ID	Electrical Power Production Limit	Fuel Consumption Limit	Emission Factor for NOx
1	1,090,620 kW-hrs	84,638 gallons	9.1 g/kW-hr
2	1,090,620 kW-hrs	84,638 gallons	9.1 g/kW-hr
3	3,708,108 kW-hrs	284,462 gallons	10.2 g/kW-hr
4	5,129,549 kW-hrs	373,509 gallons	18.1 g/kW-hr
5	3,831,712 kW-hrs	273,234 gallons	19.1 g/kW-hr
6	9,422,957 kW-hrs	673,874 gallons	16.2 g/kW-hr
7	7,721,590 kW-hrs	504,235 gallons	17.1 g/kW-hr
8	7,601,621 kW-hrs	535,238 gallons	8.7 g/kW-hr
Total	39,596,777 kW-hrs	2,813,828 gallons	

9.4 At a consistent time each month, monitor and record the monthly NOx for emission units 1 through 8 using emission factors in Table 2 or emission factors determined in condition 9.8, report rolling 12 month NOx totals for units 1 through 8 per condition 41.

9.5 At a consistent time each month, monitor and record the monthly electrical power production of each of Unit IDs 1 through 8 using metering systems accurate to within 1 percent.

9.6 At a consistent time each month, monitor and record the monthly fuel consumption of each of Unit IDs 1 through 8 using metering systems accurate to within 5 percent.

9.7 At a consistent time each month, calculate and record the 12 month rolling total electrical power production and fuel consumption for each of Unit IDs 1 through 8. Report per condition 41.

9.8 After department approval of the NOx source test conducted under conditions 26 - 35, use the source test emission factors to calculate the unit's assessable emissions in condition 14. If the emission factor for any given load differs from the values listed in Table 2 recalculate the 12 consecutive month total emissions, starting six months prior to the source test, and submit an updated Operating Report for those periods to the department's Fairbanks Office within 30 days after approval.

[Permit to Operate No. 9625-AA003, 6/21/96]
[18 AAC 50.326(a), 10/1/04]
[40 C.F.R. 71.2 and 71.6(a)(1 & 3), 7/1/03]

Section 5. Insignificant Emission Units

This section contains the requirements that the Permittee identified under 18 AAC 50.326(d)(2) as applicable to insignificant emission units at the stationary source. This section also specifies the testing, monitoring, recordkeeping, and reporting for insignificant emission units that the department finds necessary to ensure compliance with the applicable requirements. Insignificant emission units are not exempted from any air quality control requirement or federally enforceable requirement.

10. For emission units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply:

10.1 The Permittee shall submit the compliance certifications of condition 42 based on reasonable inquiry;

10.2 The Permittee shall comply with the requirements of condition 20;

10.3 The Permittee shall report in the Operating Report required by condition 41 if an emission unit is insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds;

10.4 No other monitoring, recordkeeping or reporting is required.

[18 AAC 50.346(b)(4), 10/1/04]

11. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by any of the following:

11.1 more than 20 percent for a total of more than three minutes in any one hour[4];

[18 AAC 50.050(a)(2) & 50.055(a)(1), 1/18/97]
[40 C.F.R. 52.70, 7/01/03]

11.2 more than 20 percent averaged over any six consecutive minutes[5].

[18 AAC 50.055(a)(1), 5/03/02]

12. The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

13. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from an industrial process or fuel-burning equipment, to exceed 500 PPM averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

[4] See Footnote 1.
[5] See Footnote 2.

Section 6. Generally Applicable Requirements

Permit Fees

14. **Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-405.

[18 AAC 50.326(j)(1), 18 AAC 50.400-405, 1/29/05, AS 37.10.052(b), 2000, AS 46.14.240 6/7/03]

15. **Assessable Emissions.** The Permittee shall pay to the department annual emission fees based on the stationary source's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of:

15.1 the stationary source's assessable potential to emit of 844.92 tpy (633.1 tons of NO_x, 34.0 tons of SO_2, 14.0 tons of PM-10, 141.7 tons of CO and 21.8 tons of VOC); or

15.2 the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the department, when demonstrated by

a. an enforceable test method described in 18 AAC 50.220;

b. material balance calculations;

c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d. other methods and calculations approved by the department.

[18 AAC 50.346(b)(1), 8/25/04; 18 AAC 50.326(a), 10/1/04; and 18 AAC 50.410 – 50.420, 1/29/05]
[40 C.F.R. 71.5(c)(3)(ii), 7/1/03]

16. **Assessable Emissions Estimates.** Emission fees will be assessed as follows:

16.1 no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the department can verify the estimates; or

16.2 if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in condition 15.

[18 AAC 50.346(b)(1), 5/3/02; 18 AAC 50.326(a), 10/1/04; and 18 AAC 50.410 – 50.420, 1/29/05]
[40 C.F.R. 71.5(c)(3)(ii), 7/1/03]

17. **Good Air Pollution Control Practice.** The Permittee shall do the following for emission unit IDs 1 through 8:

17.1 perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

17.2 keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and

17.3 keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.030, 50.346(b)(5), & 50.326(j)(5), 10/1/04]

18. Dilution. The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a) 1/18/97]

18.1 Check all ductwork and exhaust systems for leaks, and repair any leaks found, no sooner than 30 days prior to conducting a source test to demonstrate compliance with this permit.

18.2 Keep records of all inspections and repairs performed under this condition.

18.3 Upon request of the department, submit copies of the records.

[18 AAC 50.326(a), 10/1/04]
[18 AAC 50.346(c), 50.045(d), & 50.040(e), 10/1/04]

19. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a stationary source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.

20. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72; 18 AAC 50.040(e) & 50.346(a), 10/1/04]
[40 C.F.R. 71.6(a)(3), 7/1/03]

21. Monitoring, Record Keeping, and Reporting for Air Pollution Prohibited

21.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 40.

21.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 20.

21.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of condition 20; or

b. the department notifies the Permittee that it has found a violation of condition 20.

21.4 The Permittee shall keep records of:

a. the date, time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 20; and

d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

21.5 With each stationary source Operating Report under condition 41, the Permittee shall include a brief summary report which must include:

a. the number of complaints received;

b. the number of times the Permittee or the department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the Permittee or department found necessary that were not taken within 24 hours.

21.6 The Permittee shall notify the department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.346(a) & 50.326(a), 10/1/04]
[40 C.F.R. 71.6(a)(3), 7/1/03]

22. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard[6], the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under condition 40 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under condition 40.

[18 AAC 50.235(a) & 50.326(j)(5), 10/1/04]
[18 AAC 50.040(j)(3) and 50.326(c)(2) & (j)(2), 10/1/04]
[40 C.F.R. 71.5(a)(1)(iii) and 71.7(b) & (c)(1)(ii), 7/1/03]

[6] *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

23. **Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 C.F.R. §61.145, §61.150, and §61.152, and the applicable sections set forth in 40 C.F.R. §61, Subpart A and Appendix A.

[18 AAC 50.040(b)(2)(F), 10/1/04]
[40 C.F.R. 61, Subparts A & M, and Appendix A, 7/1/03]

24. **Refrigerant Recycling and Disposal.** The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. §82, Subpart F.

[18 AAC 50.040(d), 10/1/04]
[40 C.F.R. 82, Subpart F, 7/1/03]

25. **Open Burning.** The Permittee shall not conduct open burning at the stationary source:

[18 AAC 50.065, and 18 AAC 50.040(j) & 50.326(j), 1/29/05]
[40 C.F.R. 71.6(a)(3), 7/1/03]
[18 AAC 50.055(g), 10/1/04]

Section 7. General Source Testing and Monitoring Requirements

26. Requested Source Tests. In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 1/18/97 & 18 AAC 50.345(a) & (k), 5/03/02]

27. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing:

27.1 At a point or points that characterize the actual discharge to into the ambient air; and

27.2 At the maximum rated burning or operating capacity of the unit or another rate determined by the department to characterize the actual discharge into the ambient air.

[18 AAC 50.220(b), 1/18/97]

28. Reference Test Methods. The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

28.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. §60.

[18 AAC 50.220(c)(1)(A), 1/18/97 & 18 AAC 50.040(a), 10/1/04]
[40 C.F.R. 60, 7/1/03]

28.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. §61.

[18 AAC 50.040(b), 10/1/04 & 18 AAC 50.220(c)(1)(B), 1/18/97]
[40 C.F.R. 61, 7/1/03]

28.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. §63.

[18 AAC 50.040(c), 10/1/04 & 18 AAC 50.220(c)(1)(C), 1/18/97]
[40 C.F.R. 63, 7/1/03]

28.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted as set out in Reference Method 9 and may use the forms in Section 12 to record data.

[18 AAC 50.030, 5/03/02, 18 AAC 50.220(c)(1)(D), 1/18/97]

28.5 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified 40 C.F.R. §60, Appendix A.

[18 AAC 50.040(a)(4), 10/1/04; & 18 AAC 50.220(c)(1)(E), 1/18/97]
[40 C.F.R. 60, Appendix A, 7/1/03]

28.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. §51, Appendix M, Methods 201 or 201A and 202.

[18 AAC 50.035(b)(2), 10/1/04; & 18 AAC 50.220(c)(1)(F), 1/18/97]
[40 C.F.R. 51, Appendix M, 7/1/03]

28.7 Source testing for emissions of any pollutant may be determined using an alternative method approved by the department in accordance with Method 301 in Appendix A to 40 C.F.R. §63.

[18 AAC 50.040(c)(19), 10/1/04 & 18 AAC 50.220(c)(2), 1/18/97]
[40 C.F.R. 63, Appendix A, Method 301, 7/1/03]

29. **Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific unit type, corrected to standard conditions (dry gas at 68°F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3), 1/18/97; & 18 AAC 50.990(102), 10/1/04]

30. **Test Exemption.** The Permittee is not required to comply with conditions 32, 33, or 34 when the exhaust is observed for visible emissions by Method 9 Plan or Smoke/No Smoke Plan.

[18 AAC 50.345(a), 5/03/02]

31. **Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the department's appropriate division director or designee.

[18 AAC 50.345(a) & (l), 5/03/02]

32. **Test Plans.** Before conducting any source tests, the Permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the unit will operate during the test and how the Permittee will document this operation. A complete plan must be submitted within 60 days of receiving a request under condition 26 and at least 30 days before the scheduled date of any tests unless the department agrees in writing to some other time period. Retesting may be done without resubmitting the plan

[18 AAC 50.345(a) & (m), 5/03/02]

33. **Test Notification.** At least 10 days before conducting a source test, the Permittee shall give the department written notice of the date and time the source test will begin.

[18 AAC 50.345(a) & (n), 5/03/02]

34. **Test Reports.** Within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline* of Volume III, Section IV.3 of the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030. The Permittee shall additionally certify the results in the manner set out in condition 37 of this permit. If requested in writing by the department, the Permittee must provide preliminary results in a shorter period of time specified by the department.

[18 AAC 50.345(a) & (o), 5/03/02]

35. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in condition 4, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f), 1/18/97]

Section 8. General Recordkeeping, Reporting, and Compliance Certification Requirements

Recordkeeping Requirements

36. Recordkeeping Requirements. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including

[18 AAC 50.326(a), 10/1/04]
[40 C.F.R. 60.7(f), Subpart A and §71.6(a)(3)(ii)(B), 7/1/03]

36.1 Copies of all reports and certifications submitted pursuant to this section of this permit.

36.2 Records of all monitoring required by this permit, and information about the monitoring including

a. the date, place, and time of sampling or measurements;

b. the date analyses were performed;

c. the company or entity that performed the sampling and analyses;

d. the analytical techniques or methods used in the analyses; and

e. the results of the analyses and ,

f. the operating conditions as existing at the time of sampling or measurement.

Reporting Requirements

37. Certification. The Permittee shall certify all reports, compliance certifications, or other documents submitted to the department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

37.1 The department may accept an electronic signature on an electronic application or other electronic record required by the department if

a. a certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and

b. the person providing the electronic signature has made an agreement, with the certifying authority described in 38.1a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.345(a) & (j), 5/3/02; 18 AAC 50.205 & 50.326(j), 12/1/04]

38. Submittals. Unless otherwise directed by the department or this permit, the Permittee shall send two copies of reports, compliance certifications, and other submittals required

by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with condition 37.

[18 AAC 50.326(a), 10/1/04]
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/03]

39. Information Requests. The Permittee shall furnish to the department, within a reasonable time, any information the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the department copies of records required to be kept by this permit. The department, in its discretion, will require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.345(a) & (i), 5/3/02; 18 AAC 50.200 & 50.326(a), 10/1/04]
[40 C.F.R. 71.5(a)(2) & 71.6(a)(3), 7/1/03]

40. Excess Emission and Permit Deviation Reports.

40.1 Except as provided in condition 20, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non-routine repair that causes emissions in excess of a technology based emission standard;

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which the emissions or deviation occurs or is discovered, except as provided in condition 40.1c(i) or 40.1c(ii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the department provides written permission to report under condition 40.1c; and

(iii) for failure to monitor, as required by other applicable conditions in this permit.

40.2 The Permittee must report using either the department's on-line form, which can be found at http://www.dec.state.ak.us/air/ap/docs/adby/4notform.pdf ,or if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used.

40.3 If requested by the department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 50.240(c), & 50.326(j)(3), & 50.346(b)(2), 10/1/04]

41. Operating Reports. During the life of this permit, the Permittee shall submit to the department an original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

41.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

41.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 41, either

a. the Permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) a description of the excess emissions or permit deviation; and

(v) any corrective action or preventive measures taken and the date or dates of such actions; or

b. When excess emissions or permit deviations have already been reported under condition 40, the Permittee may cite the date or dates of those reports.

41.3 The operating report must include a listing of emissions monitored under condition(s) 0 and 2.2c which trigger additional testing or monitoring, and whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report:

a. the date of the emissions;

b. the equipment involved;

c. the permit condition affected; and

d. the monitoring result which triggered the additional monitoring.

[18 AAC 50.346(b)(6) & 50.326(a), 10/1/04]
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/03]

42. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the department one original and one copy of an annual compliance certification report as follows:

[18 AAC 50.205 & 50.326(j), 10/1/04 & 50.345(a) & (j), 5/03/02]
[40 C.F.R. 71.6(c)(5), 7/1/03]

42.1 Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows:

a. identify each term or condition set forth in Section 3 through Section 8, that is the basis of the certification;

b. briefly describe each method used to determine the compliance status;

c. state whether compliance is intermittent or continuous; and

d. identify each deviation and take it into account in the compliance certification.

42.2 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

43. NSPS and NESHAP Reports. The Permittee shall:

43.1 attach to the facility operating report required by condition 41, copies of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10; and

43.2 upon request by the Department, notify and provide a written copy of any EPA-granted waiver of the federal emission standards, record keeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules.

[18 AAC 50.326(j)(4), 12/1/04, 18 AAC 50.040, 12/3/05]

Section 9. Permit Changes and Renewal

44. Emissions Trading: No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.

[18 AAC 50.040(j)(4) and 50.326(j), 10/1/04]
[40 C.F.R. 71.6(a)(8), 7/1/03]

45. Off Permit Changes. The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 CFR part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met:

[18 AAC 50.040(j)(4) and 50.326(j), 10/1/04]
[40 C.F.R. 71.6(a)(12), 7/1/03]

45.1 Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;

45.2 Provide contemporaneous written notice to EPA and the department of each such change, except for changes that qualify as insignificant under 18 AAC 50.326(d) – (i). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change;

45.3 The change shall not qualify for the shield under 40 CFR 71.6(f);

45.4 The Permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

46. Operational Flexibility. The Permittee may make changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions):

46.1 The Permittee shall provide EPA and the department with a notification no less than 7 days in advance of the proposed change.

46.2 For each such change, the written notification required above shall include a brief description of the change within the permitted stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

46.3 The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to condition 46.

46.4 Trading of emission increases and decreases as described in 71.6(13)(iii) has not been requested by the Permittee.

[40 C.F.R. 71.6(a)(13), 7/1/03]
[18 AAC 50.040(j)(4) and 50.326(j), 10/1/04]
[40 C.F.R. 71.6(a)(13), 7/1/03]

47. **Permit Renewal**. To renew this permit, the Permittee shall submit an application under 18 AAC 50.326(a) no sooner than **March 7, 2010** and no later than **March 7, 2011,** and shall complete the renewal application before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the source's right to operate, unless a timely and complete renewal application has been submitted consistent with 40 C.F.R. 71.7(b) and 71.5(a)(1)(iii).

[18 AAC 50.040(j)(3) and 50.326(c)(2) & (j)(2), 10/1/04]
[40 CFR 71.5(a)(1)(iii) and 71.7(b) & (c)(1)(ii), 7/1/03]

Section 10. Compliance Requirements

General Compliance Requirements

48. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

48.1 included and specifically identified in the permit; or

48.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (b), 5/03/02]

49. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

49.1 an enforcement action;

49.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

49.3 denial of an operating permit renewal application.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (c), 5/03/02]

50. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (d), 5/03/02]

51. The Permittee shall allow the department or an inspector authorized by the department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

51.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

51.2 have access to and copy any records required by the permit;

51.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

51.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.326(j)(3) and 50.345(a) & (h), 10/1/04]

Section 11. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290 and based on information supplied in the stationary source application, this section of the permit contains the requirements determined by the department not to be applicable to the stationary source.

52. Nothing in this permit shall alter or affect the following:

52.1 The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or

52.2 The liability of an owner or operator of a stationary source of any violation of applicable requirements prior to or at the time of the permit issuance.

53. Table 3 identifies the emission units that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table 3 become applicable during the permit term, the Permittee shall comply with such requirements on a timely basis including, but not limited to, proving appropriate notification to EPA, obtaining a construction permit, and/or an operating permit revision.

Table 3 - Permit Shields Granted

Emission Unit ID	Applicable Requirements	Reason for Non-Applicability
Tank 1 Tank 2 Tank 3	40 C.F.R. 60 Subpart K - Standards of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after June 11, 1973, and prior to May 19, 1978	Tanks 1 and 2 were constructed and installed in 1943 and pre-dates the applicable 1973 rule. Tank 3 was built in 1995 and not subject to this rule.
Tank 1 Tank 2 Tank 3	40 C.F.R. 60 Subpart Ka - Standards of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984	Tanks 1 and 2 were constructed and installed in 1943 and pre-dates the applicable 1973 rule. Tank 3 was built in 1995 and not subject to this rule.
Tank 1 Tank 2 Tank 3	40 C.F.R. 60 Subpart Kb - Standards of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after July 23, 1984 and has a tank capacity greater than 10,560 gallons.	Tanks 1 and 2 were constructed and installed prior to 1984 and not subject to this rule. Tank 3 was constructed after 1984 with a capacity of 10,000 gallons. The capacity is under the requirement and therefore not subject to this rule.

[18 AAC 50.326(j), 10/1/04]
[40 C.F.R. 71.6(f)(1)(ii), 7/1/03]

Section 12. Visible Emissions Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company & Stationary Source: _____

Location: _____

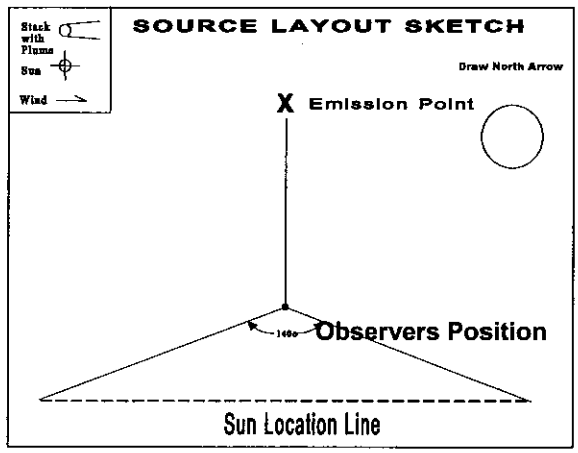
Test No.: _____ Date: _____

Emission Unit: _____

Production Rate/Operating Rate: _____

Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description: Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Visible Emissions Observation Record

Page _____ of _____

Company & Stationary Source _____ Certified Observer _____

Test Number Clock Time

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____ _____
Observer Signature and Date Certified By and Date

Data Reduction:
Duration of Observation Period (minutes): _____ Duration Required by Permit (minutes) _____
Number of Observations _____ Highest Six –Minute Average Opacity (%) _____
Number of Observations exceeding 20% _____
In compliance with three-minute aggregate opacity limit? (Yes or No) _____
In compliance with six-minute opacity limit? (Yes or No) _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 13. Material Balance Calculation

If the sulfur content of a fuel shipment is greater than 0.75% by weight, calculate the three-hour exhaust concentration of SO_2 using the following equations:

A. = 31,200 x [**wt%S_{fuel}**] = 31,200 x _____ = _____

B. = 0.148 x [**wt%S_{fuel}**] = 0.148 x _____ = _____

C. = 0.396 x [**wt%C_{fuel}**] = 0.396 x _____ = _____

D. = 0.933 x [**wt%H_{fuel}**] = 0.933 x _____ = _____

E. = B + C + D = _____ + _____ + _____ = _____

F. = 21 – [**vol%$_{dry}$O2, $_{exhaust}$**] = 21 - _____ = _____

G. = [**vol%$_{dry}$O2, $_{exhaust}$**] ÷ F = _____ ÷ _____ = _____

H. = 1 + G = 1 + _____ = _____

I. = E x H = _____ x _____ = _____

SO_2 concentration = A ÷ I = _____ ÷ _____ = _____ ppm

The **wt%S_{fuel}**, **wt%C_{fuel}**, and **wt%H_{fuel}** are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to condition 7.1. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%$_{dry}$O$_{2, exhaust}$**) is obtained from oxygen meters, manufacturer's data, or from the most recent ORSAT analysis at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%S_{fuel}** = 1.0%, then enter 1.0 into the equations not 0.01 and if **vol%$_{dry}$O$_{2, exhaust}$** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.346(c), 10/1/04]

Section 14. ADEC Notification Form[7]

Dutch Harbor Power Plant
Stationary Source Name

AQ0215TVP02
Air Quality Permit Number

City of Unalaska
Company Name

When did you discover the Excess Emissions/Permit Deviation?

Date: _____ / _____ / _____ Time: _____ : _____

When did the event/deviation occur?

Begin Date: _____ / _____ / _____ Time: _____ : _____ (please use 24hr clock)
End Date: _____ / _____ / _____ Time: _____ : _____ (please use 24hr clock)

What was the duration of the event/deviation?: _____ : _____ (hrs:min) or _____ days
(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification: (please check only 1 box and go to the corresponding section)

☐ Excess Emissions - Complete Section 1 and Certify.

☐ Deviation from Permit Condition - Complete Section 2 and Certify

☐ Deviations from COBC, CO, or Settlement Agreement - Complete Section 2 and Certify

Section 1. Excess Emissions

(a) Was the exceedance: ☐ Intermittent ☐ Continuous

(b) Cause of Event (Check one that applies):

☐ Start Up /Shut ☐ Natural Cause (weather/earthquake/flood)

☐ Control Equipment Failure ☐ Scheduled Maintenance/Equipment Adjustment

☐ Bad fuel/coal/gas ☐ Upset Condition ☐ Other _____

(c) Description

Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emissions Units Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

EU ID	Emission Unit Name	Permit Condition Exceeded/Limit/Potential Exceedance

(e) Type of Incident (Please Check only one).

[7] Revised as of December 6, 2004

☐ Opacity _____ % ☐ Venting _____ (gas/scf) ☐ Control Equipment Down

☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Record Keeping Failure

☐ Marine Vessel Opacity ☐ Failure to monitor/report ☐ Flaring

☐ Other: _____

(f) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable? ☐ Yes ☐ No

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ Yes ☐ No

Certify Report (go to end of form)

Section 2 Permit Deviations

(a) Permit Deviation Type (check one only box, corresponding with the section in the permit).

☐ Emission Unit Specific

☐ General Source Test/Monitoring Requirements

☐ Recordkeeping/Reporting/Compliance Certification

☐ Standard Conditions Not Included in Permit

☐ Generally Applicable Requirements

☐ Reporting/Monitoring for Diesel Engines

☐ Insignificant Emission Unit

☐ Stationary Source Wide

☐ Other Section _____ (title of section and section number of your permit).

(b) Emission Unit Involved.

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding permit conditions and the deviation.

(c) Description of Potential Deviation:

EU ID	Emission Unit Name	Permit Condition / Potential Deviation

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions:

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certifcation:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

To Submit this Report:

Fax to: 907-451-2187;

Email to: airreports@dec.state.ak.us - *if emailed, the report must be certified within the Operating Report required for the same reporting period per 41;*

Mail to: ADEC, Air Permits Program, 610 University Avenue, Fairbanks, AK 99709-3643;

Phone Notification: 907-451-5173 - p*hone notifications require a written follow-up report within the deadline listed in condition 40; OR*

Online Submission: *(Website is not yet available) - if submitted online, the report must be certified within the Operating Report required for the same reporting period per condition 41.*

Alaska Department of Environmental Conservation

Air Permits Program

City of Unalaska

Dutch Harbor Power Plant

STATEMENT OF BASIS

of the terms and conditions for

Permit No. AQ0215TVP02

Prepared by Chris Kent

August 8, 2007

INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of renewal Operating Permit No. AQ0215TVP02.

The Dutch Harbor Power Plant is a prime power diesel-electric generating stationary source that provides electricity to about 550 residential and commercial customers in the Unalaska and Dutch Harbor area. The stationary source is owned and operated by City of Unalaska, Department of Public Utilities. City of Unalaska, Department of Public Utilities, is the Permittee for the stationary source's operating permit.

PROCESS DESCRIPTION

As provided in the application, the stationary source contains eight diesel-electric generator sets. The storage tanks located onsite are insignificant emission units.

EMISSION UNIT INVENTORY AND DESCRIPTION

Section 2 of Operating Permit No. AQ0215TVP02 contains Table 1 describing the emission units regulated by the permit. The table is provided for informational and identification purposes only. Specifically, the emission unit rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

Section 3 of Operating Permit No. AQ0215TVP02 contains emission information as provided in the application. The historical actual emissions and a summary of the potential to emit (PTE)[1] and assessable PTE are shown in Table A and Table B below.

Table A.-- Actual Emissions by Year

Total Actual Emission in Tons Per Year (TPY) Estimates[2]					
Year	NOx	CO	PM-10[3]	SO2[4]	VOC
7/1/98 – 6/30/99	477	103	9	11	15
7/1/99 – 6/30/00	473	104	10	9	15
7/1/01 – 6/30/02	426	113	8.7	6.7	4.7
7/1/02 – 6/30/03	414	110	10	13	12
7/1/03 – 6/30/04	450.3	98.5	16	13	12

[1] *Potential to Emit or PTE* means the maximum capacity of a stationary source to emit a pollutant under its physical or operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source, as defined in AS 46.14.990(23), effective 12/3/05.

[2] These actual-emission estimates are based on data from facility operating reports and from emission factors in the operating permit application.

[3] A heating value of 0.138 MMBtu/gallon was assumed for diesel fuel.

[4] A density of 7.1 lb/gallon was assumed for the diesel fuel.

Table B.- Emissions Summary

Pollutant	NOx	CO	PM-10	SO_2	VOC	HAPs	Total
Potential Emissions (TPY)	633.1	141.7	14.0	34.0	21.8	0.32	844.92
Assessable Emissions (TPY)	633.1	141.7	14.0	34.0	21.8	0	844.6

The potential emissions totals are carried from Operating Permit No. AQ0215TVP01, they were modified to include a revised calculation of hazardous air pollutants (HAPs). The emission calculations submitted with the operating permit renewal application were not used because they were based on the acceptance of the proposed minor permit. The minor permit application was withdrawn during the permit renewal process. The emission factors were derived from a mixture of AP-42, mass balance calculations, and vendor data. The assessable PTE listed under condition 15 is the sum of the emissions of each individual regulated air pollutant for which the stationary source has the potential to emit quantities greater than 10 TPY. The emissions listed in Table A are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit to the stationary source.

The Department recalculated HAP emissions for the renewal permit using emission factors from US EPA Compilation of Air Pollution Emission Factors, Volume I Stationary Point and Area Sources, AP-42, Fifth Edition, Table 3.4-4 as revised October 1996.

BASIS FOR REQUIRING AN OPERATING PERMIT

Dutch Harbor Power Plant requires an operating permit because it has the potential to emit 100 tons per year (TPY) or more of a regulated air pollutant as set out by 18 AAC 50.326(a) and 40 C.F.R. 71(a)(5). Therefore, the Dutch Harbor Power Plant meets the definition of operating permit stationary source in the state regulations.

The Dutch Harbor Power Plant is classified as Prevention of Significant Deterioration (PSD) major as defined in 18 AAC 50.306 because it has the potential to emit more than 250 TPY of a regulated air pollutant (NOx emissions) in an area classified as attainment or unclassifiable. The Dutch Harbor Power Plant under went a PSD review as part of Permit No. 9625-AA003. In that permit action, the department assessed best available control technology (BACT) for Unit ID 8.

Alaska regulations require operating permit applications to include identification of "regulated sources." As applied to Dutch Harbor Power Plant, the state regulations require a description of:

- ✓ Each emission unit regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment [18 AAC 50.335(e)(4)(C)]; and
- ✓ Emission units subject to requirements in an existing department permit [18 AAC 50.335(e)(5)]

The emission units at Dutch Harbor Power Plant classified as "regulated sources" according to the above department regulations are listed in Table 1 of Operating Permit No. AQ0215TVP02.

AIR QUALITY PERMITS

Air Quality Permit to Operate History

The source's first Permit to Operate (No. **9625-AA003**) was issued on June 21, 1996. This permit included all construction authorizations issued through June 21, 1996, and was issued before January 18, 1997 (the effective date of the divided operating and construction-permitting program). All stationary source-specific requirements established in this previous permit are included in the new operating permit as described below.

Construction Permit History

A construction permit was issued on January 31, 2007 for renovation of the power house sources. The Department received the City's original application on November 14, 2005 and found it incomplete on March 2, 2006. The City revised the application and the Department found it complete on June 5, 2006. The Department received supplements to the application through November 20, 2006 and the final permit was issued on January 31, 2007. Since the power house modifications were not constructed prior to issuance of this permit, the new Title I obligations of Construction Permit No. AQ0215CPT02 are not incorporated in this permit. The Title V Operating Permit must be revised with Construction Permit terms and conditions and additional monitoring prior to startup. The requirement for the Operating Permit modification is described in Section 4.4 of the Technical Analysis Report of the Construction Permit.

Minor Permit History

On January 24, 2005, the department received a minor permit application as set out by 18 AAC 50.508(6). In that application, the City requested a revision to the ambient air quality limits listed in Permit No. AQ0215TVP01 Revision 1 carried over from Permit to Operate No. 9625-AA003. Specifically, the City requested that the department change the individual generator energy and fuel limits to an overall limit for fuel consumption and an overall limit for NOx emission. The City requested that the minor permit be incorporated into this renewal Permit No. AQ0215TVP02. However, the minor permit was withdrawn and was not incorporated into this permit.

Initial Title V Operating Permit History

The owner or operator submitted an initial Title V application on December 4, 1997. This application was amended on March 3, 1998. The department deemed the application complete on April 14, 1998. The department issued Operating Permit No. 215TVP01 on July 28, 2000. Permit No. AQ0215TVP01 Revision 1 was issued on September 16, 2002 to update the condition concerning emission fees in the permit to the standard permit condition for emission fees which was adopted by reference into 18 AAC 50 effective May 3, 2002.

Renewal Title V Operating Permit History

The owner or operator submitted a renewal Title V application on January 24, 2005. The department deemed the application complete on July 8, 2005 after the applicant submitted supplement information.

STATIONARY SOURCE-SPECIFIC REQUIREMENTS CARRIED FORWARD

Table C below lists the old requirements (condition) and the new condition that carries over the old requirement into the new permit.

Table C. - A Comparison of Permit No. AQ0215TVP01 Conditions to Permit No. AQ0215TVP02 Conditions

Permit No. AQ0215TVP01 Revision # 1 Condition Number	Description of Requirement	Permit No. AQ0215TVP02 Condition Number	How Condition was Revised
Section 2	General emission information authority for permit classification.	SOB	Same information, different format
Table 1	Emission unit information, emission unit name, description and rating..	Table 1	Added installation dates, same information as Permit No. 215TVP01
1 and 2	Assessable emissions and fees.	Section 6	Same information as Permit No. 215TVP01
3, 4, and Section 13	Visible emissions and particulate matter monitoring plan.	Section 3, 4, and Section 12	Same limit, monitoring and reporting revised to standard condition
5	Must meet the Sulfur emission standard.	7	Same information as Permit No. 215TVP01
5 and Section 15	Sulfur limit, and material balance calculation as a monitoring requirement if Sulfur content exceeds 0.75%.	Condition 7 and Section 13	Same limit, monitoring and reporting revised to standard condition
6	Annual power production and fuel-consumption limits.	9	Table 2 revised to include emission factors
6.1, 6.3, and 33.2	Monitor electrical power production and fuel usage.	9.4 and 9.6	Same information, different format
7 through 10	Standards for Insignificant Sources	Section 5 and Conditions 10 through 13	Revised to standard condition.
11 and 12	Asbestos NESHAP and Refrigerant disposal.	23 and 24	Unchanged
13	Good air pollution control practices	17	Revised to standard condition.
14	Dilution	18	Revised to standard condition.

Permit No. AQ0215TVP01 Revision # 1 Condition Number	Description of Requirement	Permit No. AQ0215TVP02 Condition Number	How Condition was Revised
15	Modification of the stationary source	None	Requirements are in regulations.
16	Bulk Material handling	NA	Removed from current permit.
17	Stack Injection	19	Revised to standard condition.
18	Open burning	25	Prohibits open burning at the facility. Changed with agreement from Stationary Source.
19	Air Pollution Prohibited	20	Not revised
22 and 24	Source testing and monitoring requirements.	Section 7 and 26	Same information
23	Operating conditions.	27	Not revised.
26	Deadlines for submittal of test plans for source test	32	Same requirements would allow requests for different time period for source test.
27	10 day notification for a source test	33	Not revised
28	Certify source test results within 45-days of completion.	34	Test deadline is now 60 days. DEC can ask for summary of results in less time.
30	Reports must be certified by responsible official.	37	Revised to standard condition
33	Records must be kept for a minimum of five years	36	Revised to standard condition
34 and Section 16	Excess emission and Permit Deviation reporting.	40 and Section 14	Revised to standard condition

Permit No. AQ0215TVP01 Revision # 1 Condition Number	Description of Requirement	Permit No. AQ0215TVP02 Condition Number	How Condition was Revised
35	Facility Operating reports	41	Revised to standard condition
36	Annual Compliance Certification	42	Change reporting date from February 1 to March 31 and revised to standard condition language
44	Inspector authorization	51	Revised to standard condition
SOB	Permit documentation	SOB	Carried forward

Note: Some conditions are skipped because they are standard permit conditions.

LEGAL AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in Operating Permit No. AQ0215TVP02.

Section 3, Conditions 1 - 3 Visible Emission Standard and MR&R

Applicability: The regulation applies to operation of all fuel-burning equipment in Alaska. EU IDs 1 through 8 are fuel-burning equipment.

Factual Basis: Conditions 1 and 2 require the Permittee to comply with the federal and the state visible emission standards applicable to fuel-burning equipment and incinerators. The Permittee shall not cause or allow the equipment to violate these standards.

MR&R requirements are listed in condition 3 of the permit.

These conditions have been adopted into regulations as standard conditions. One of these conditions has been modified in this permit. For liquid fuels (Standard Condition IX), the department removed an error that inadvertently specified three sets of 18 minute observations when conducting annual observations. The department also added a provision that clarifies the option to continue an established monitoring frequency for renewal permits. The department plans to adopt these changes into a revised standard condition in the future.

The Permittee must establish by actual visual observations, which can be supplemented by other means, such as a defined Stationary Source Operation and Maintenance Program that the stationary source is in continuous compliance with the State's emission standards for visible emissions and particulate matter

These conditions detail a stepwise process for monitoring compliance with the State's visible emissions and particulate matter standards for liquid and gas fired sources. Equipment types covered by these conditions are internal combustion engines, turbines, heaters, boilers, and

flares. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program.

Reasonable action thresholds are established in these conditions that require the Permittee to progressively address potential visible emission problems from sources either through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded.

Liquid Fired:

Monitoring – The visible emissions may be observed by either Method-9 or the Smoke/No Smoke plans as detailed in condition 2.1. Corrective actions such as maintenance procedures and either more frequent or less frequent testing may be required depending on the results of the observations.

Recordkeeping - The Permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

Reporting - The Permittee is required to report: 1) emissions in excess of the federal and the state visible emissions standard and 2) deviations from permit conditions. The Permittee is required to include copies of the results of all visible emission observations with the stationary source operating report.

Condition 4 - 6 Particle Matter (PM) Standard

Applicability: The PM standard applies to operation of all fuel burning equipment in Alaska. EU IDs 1 through 8 are fuel-burning equipment. The SIP standard for PM applies to all fuel-burning equipment because it is contained in the federally approved SIP dated October 1983.

Factual Basis: Condition 4 requires the Permittee to comply with the state PM (also called grain loading) standard applicable to fuel-burning equipment. The Permittee shall not cause or allow fuel-burning equipment to violate this standard.

MR&R requirements are listed in conditions 5 and 5.

The Permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Stationary Source Operation and Maintenance Program, that the stationary source is in continuous compliance with the State's emission standards for particulate matter.

These conditions detail a stepwise process for monitoring compliance with the State's particulate matter standards for liquid and gas fired sources. Equipment types covered by these conditions are internal combustion engines, turbines, heaters, and boilers. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program.

Liquid Fired:

Monitoring – The Permittee is required to conduct PM source testing if threshold values for opacity are exceeded.

Recordkeeping - The Permittee is required to record the results of PM source tests.

Reporting - The Permittee is required to report: 1) incidents when emissions in excess of the opacity threshold values have been observed, 2) and results of PM source tests. The Permittee is required to include copies of the results of all visible emission observations with the stationary source operating report.

Condition 7, Sulfur Compound Emission Standard

Applicability: The sulfur emission standard applies to operation of all fuel-burning equipment in the State of Alaska. EU IDs 1 through 8 are fuel-burning equipment. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October 1983.

Factual Basis: The department revised this condition to incorporate the language of the Permit to Operate No. 9625-AA003 and language of the standard permit condition to apply a more restrictive limit for fuel sulfur content. Permit to Operate No. 9625-AA003 required fuel burning equipments and industrial processes to use fuel with a sulfur content of no greater than 0.17 percent by weight.

Sulfur content is submitted in the semi-annual operating reports, and the permittee is required to submit records for fuel sulfur content. The permittee is required to submit an excess emissions report if fuel sulfur levels are greater than 0.17 sulfur by weight.

Condition 8, Used Oil in Diesel Engines

Applicability: If the Permittee burns used oil, then these requirements apply.

Factual basis: The Permittee is prohibited from burning used oil blends in the engines until the department approves of a source test demonstrating that burning the used oil will comply with the particulate matter emission standard of condition 4 and the visible emission standard of condition 1. Because of various metal contaminants, used oil may have higher particulate emissions and sulfur emissions than virgin fuel oil. Staff experience indicates that burning used oil by itself may violate 18 AAC 50.055(b)(1) and (c).

The permittee may burn used oil blends during the initial source test for testing purposes only.

Although this condition should ensure compliance with the applicable emission standards of 18 AAC 50, this permit does NOT ensure compliance with other applicable state or federal laws concerning management, use, or disposal of used oil.

The permit lists blending, testing, recording, and reporting requirements. The department added a requirement to blend at a ratio of no more than in the particulate matter source test, unless department approves to blending at a greater ratio. However, the Permittee must still test for sulfur and ensure that the ratio of used oil will comply with the sulfur limit.

Section 4, Condition 9, Limits to Protect Ambient Air Quality

Applicability: Permit No. 9625-AA003 included annual power production and fuel limits on each of Unit IDs 1 though 8 to protect ambient air quality for SO_2 and NO_2. These limits are carried over into this operating permit.

Factual Basis: Condition 9 re-iterates limits from the old permit to operate. An ambient air quality impact analysis was done for NO_2, SO_2, and PM-10. The modeling, which was

based on the limits in condition 9, indicated that the Dutch Harbor Power Plant will not cause or contribute to violations of the NO_2, SO_2, and PM-10 standards.

Permit No. 9625-AA003 required the City to install, maintain, and calibrate one ambient air pollutant monitoring station to collect NO_2 data for a minimum of one year, with very specific instructions. In a department memorandum on April 5, 2000, from Mr. Richard Heffern to Mr. Jim Baumgartner, Mr. Heffern concluded, after reviewing the data, that the planning and operating ambient and meteorological monitoring station collected complete and highly reliable PSD-quality data. According to the April 5th, 2000 memorandum, the monitored NO_2 annual concentration was 18.6 micrograms per cubic meter (9.9 ppb), which was below the State and federal annual air quality NO_2 standard of 100 micrograms per cubic meter (53 ppb). This memorandum was sent to the Permittee on April 12, 2000.

Since the ambient monitoring showed relatively low ambient NO2 values and the permittee completed a one-year monitoring program, the Title V permit does not carry forward the ambient monitoring condition.

Section 5, Conditions 10 - 13, Insignificant Emission Units

Applicability: These general emission standards apply to all industrial processes fuel-burning equipment, and incinerators regardless of size.

Factual Basis: The conditions re-iterate the general standards and require compliance for insignificant emission units. The Permittee may not cause or allow their equipment to violate these standards. Insignificant emission units are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The department finds that the insignificant emission units at this stationary source do not need specific monitoring, recordkeeping and reporting to ensure compliance under these conditions.

Condition 10 requires certification that the emission units did not exceed state emission standards during the previous year and did not emit any prohibited air pollution.

State air quality regulations adopted effective May 3, 2002 allow for an average six minute opacity observation. The existing regulation, limiting opacity to no more than 20 percent for more than three minutes in any one hour, is included because EPA Region X has not formally approved the revised opacity regulation as part of Alaska's State Implementation Plan (SIP).

Section 6, Condition 14, Administration Fees

Applicability: This condition requires the permittee, owner, or operator to pay administration fees as set out in regulation. Paying administration fees is required as part of obtaining and holding a permit with the department or as a fee for a department action.

Factual Basis: The owner or operator of a stationary source who is required to apply for a permit under AS 46.14.130 shall pay to the department all assessed permit administration fees. The regulations in 18 AAC 50.400-405 specify the amount, payment period, and the frequency of fees applicable to a permit action.

Section 6, Conditions 15 - 16, Emission Fees

Applicability: The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These standard conditions require the Permittee to pay fees in accordance with the department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air pollutant authorized by the permit (AS 46.14.250(h)(1)(A)). Air pollutant means any regulated air pollutant and any hazardous air pollutant. Therefore, assessable emissions under AS 46.14.250(h)(1)(A) means the **potential** to emit any air pollutant identified in the permit, including those not specifically limited by the permit. For example, hydrogen chloride (HCl) emissions from an incinerator are assessable emissions because they are a hazardous air pollutant, even if there is currently no emission limit on HCl for that class of incinerator.

The conditions also describe how the Permittee may calculate actual annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air pollutant. Therefore, fees based on actual emissions must also be paid on any pollutant emitted whether or not the permit contains any limitation of that pollutant.

This standard condition specifies that, unless otherwise approved by the department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The Permittee will normally pay for actual emissions - just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the stationary source, such as changes in equipment or an emission rate from existing equipment.

If the Permittee does not choose to annually calculate assessable emissions, emissions fees will be based on PTE.

The PTE set forth in the condition is based on liquid fuel with a sulfur content of 0.17 percent by weight for all units. If the actual sulfur content of the fuel is greater than these assumptions, the assessable emissions calculations provided by the Permittee should reflect the actual sulfur content. The change in these values may result in SO_2 emissions that could trigger a permit review.

Condition 17, Good Air Pollution Control Practices

Applicability: Applies to all emission units.

Factual Basis: The condition requires the Permittee to comply with good air pollution control practices for all emission units.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with

appropriate maintenance. If appropriate maintenance is not applied to the equipment, the department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

The Permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the department. The department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

Condition 18, Dilution

Applicability: Applies to the Permittee because the Permittee must comply with emission standards in 18 AAC 50.

Factual Basis: The requirement prohibits diluting emissions as a means of compliance. In practical terms, dilution only affects compliance when the emissions are being measured. Therefore, the monitoring is limited to immediately before source testing.

Dilution can occur by design or by leaks in the exhaust ductwork. Intentional dilution is not expected to be a problem, as it would increase operating costs by increasing induced draft fan power requirements. Careful review of source test plans and operating conditions will prevent intentional dilution. Therefore, only leaks need to be monitored under this condition.

The monitoring adequately prevents dilution by requiring leaks to be repaired before compliance with the emission standards are measured.

Condition 19, Stack Injection

Applicability: Stack injection requirements apply to the stationary source because the stationary source contains a stack or source constructed or modified after November 1, 1982.

Factual Basis: The condition prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 20 - 21, Air Pollution Prohibited

Applicability: Air Pollution Prohibited requirements apply to the stationary source because the stationary source will have emissions.

Factual Basis: The condition prohibits the Permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is required to report any complaints and injurious emissions. The Permittee must keep records of the date, time, and nature of all complaints received and summary of

the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the department.

The department will determine whether the necessary actions were taken. No corrective actions are necessary if the complaint is frivolous or there is not a violation of 18 AAC 50.110, however this condition is intended to prevent the Permittee from prejudging that complaints are invalid.

Condition 22, Technology-Based Emission Standards

Applicability: Technology Based Emission Standard requirements apply to the stationary source because the stationary source contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or other "technologically feasible" determinations.

Factual Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activity causes an exceedance of any technology-based emission standard in this permit. The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with condition 40. Excess emission reporting under condition 40 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under condition 40.

Condition 23, Asbestos NESHAP

Applicability: The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

Factual Basis: The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 24, Refrigerant Recycling and Disposal

Applicability: Applies if the Permittee engages in the recycling or disposal of certain refrigerants.

Factual Basis: The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F, that will apply if the Permittee uses certain refrigerants. Because these regulations include adequate monitoring and reporting requirements, simply citing the regulatory requirements is sufficient.

Condition 25, Open Burning

Applicability: The open burning state regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the stationary source.

Factual Basis: The condition prohibits the Permittee to conduct open burning activities at the source. This condition was added at the request of the source.

Section 7, Condition 26, Requested Source Tests

Applicability: Applies because this is a standard condition to be included in all permits.

Factual Basis: **Factual Basis:** The Permittee is required to conduct source tests as requested by the department. Monitoring consists of conducting the requested source test.

Conditions 27 - 29, Operating Conditions, Reference Test Methods, Excess Air Requirements

Applicability: Apply because the Permittee is required to conduct source tests by this permit.

Factual Basis: The Permittee is required to conduct source test as set out in conditions 27 through 29. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with conditions 27 through 29 consist of the test reports required by condition 34.

Condition 30, Test Exemption

Applicability: Applies when the emission unit exhaust is observed for visible emissions.

Factual Basis: As provided in 18 AAC 50.345(a), the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Conditions 31 - 34, Test Deadline Extension, Test Plans, Notifications and Reports

Applicability: Apply because the Permittee is required to conduct source test by this permit.

Factual Basis: Standard conditions 18 AAC 50.345(l) - (o) are incorporated through these conditions. These standard conditions supplement specific monitoring requirements stated elsewhere in this permit. The source test itself monitors compliance with this condition.

Condition 35, Particle Matter (PM) Calculations

Applicability: Applies when the permittee tests for compliance with the particulate matter standard.

Factual Basis: The condition incorporates a regulatory requirement for particulate matter source tests. Because this condition supplements specific monitoring requirements stated elsewhere in this permit, no monitoring, reporting, or recordkeeping is required.

Section 8, Condition 36, Recordkeeping Requirements

Applicability: Applies to records required by a permit.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional monitoring, recordkeeping or reporting is required.

Condition 37, Certification

Applicability: This is a standard condition to be included in all permits. Applies because every permit requires the Permittee to submit reports.

Factual Basis: This condition requires the Permittee to certify all reports submitted to the department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the stationary source report, even though it must still be **submitted** more frequently than the stationary source operating report. This condition supplements the reporting requirements of this permit. Electronic signatures are allowed to make it possible to submit reporting requirements electronically.

Condition 38, Submittals

Applicability: Applies because the Permittee is required to send reports to the department.

Factual Basis: This condition merely specifies where submittals to the department should be sent. Receipt of the submittal at the correct department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of the permit and no monitoring, recordkeeping or reporting for this condition is needed.

Condition 39, Information Requests

Applicability: Applies to all Permittees, and incorporates a standard condition.

Factual Basis: Incorporates a standard condition in regulation, which tells the Permittee to submit information requested by the department. Receipt of the requested information is adequate monitoring.

Condition 40, Excess Emission and Permit Deviation Reports

Applicability: Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

In accordance with 40 CFR 71.6(a)(iii)(C), a deviation is not always a violation. For a situation lasting more than 24 hours which constitute a deviation, each 24 hour period is considered a separate deviation. "Deviation" as defined in 40 CFR 71 means both "excess emission" and "permit deviation" as used in this permit, which includes:

1. a situation where emissions exceed an emission limitation or standard;
2. a situation where process or emissions control device parameter values indicate that an emission limitation or standard has not been met;
3. a situation in which observations or data collected demonstrate noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit (including indicators of compliance revealed through parameter monitoring);
4. a situation in which any testing, monitoring, recordkeeping or reporting required by

this permit is not performed or not performed as required;

5. a situation in which an exceedance or an excursion, as defined in 40 CFR Part 64, occurs; and,
6. failure to comply with a permit term that requires submittal of a report.

In accordance with 18 AAC 50.990(35) "excess emissions" means emissions of an air pollutant in excess of any applicable emission standard or limitation which is item 1 of the above definitions from 40 CFR 71. These definitions shall be considered in determining an "excess emissions" or "permit deviation" when reporting an occurrence using the ADEC notification form.

The reports themselves and the other monitoring records required under this permit provide monitoring of whether the Permittee has complied with the condition.

Condition 41, Operating Reports

Applicability: Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit. The reports themselves provide monitoring for compliance with this condition.

Condition 42, Annual Compliance Certifications

Applicability: Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no monitoring, recordkeeping or reporting is needed.

Condition 43, NSPS and NESHAPS Reports:

Applicability: Applies to emission units subject to NSPS or NESHAP federal regulations.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60 and 40 C.F.R. 61. The reports themselves provide monitoring for compliance with this condition.

Section 9, Conditions 44 - 46, Emission Trading, Permit changes. Operational Flexibility

Applicability: Applies because 40 CFR 71.6 adopted by reference under 18 AAC 50.040 require these provisions.

Factual Basis: These conditions are required for all operating permits to provide the permittee flexibility when changes occur at the stationary source.

Condition 47, Permit Renewal

Applicability: Applies if the Permittee intends to renew the permit.

Factual Basis: The condition restates the regulatory deadlines, citing the specific dates applicable to the stationary source. Submittal of the renewal application is sufficient monitoring, recordkeeping and reporting.

Section 10, Conditions 48 - 51, Compliance Requirements

Applicability: Applies because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions for compliance required for all operating permits.

Section 11, Conditions 52 and 53, Permit Shield

Applicability Applies because the Permittee has requested a shield for the applicable requirements listed under this condition.

Factual Basis: Table 3 of Operating Permit No. AQ0215TVP02 shows the permit shields that the department granted to the Permittee. The permit conditions set forth the requirements that the department determined were not applicable to the stationary source.